

1 I claim:

2 1. A level control system for controlling the thickness of a work material in a slurry  
3 form, said level control system comprising in combination:

4 a. a moving belt system;

5 b. a fluid reservoir for dispensing slurry onto the moving belt;

6 c. a control valve for filling the fluid reservoir with slurry at a controlled rate;

7 d. a blade positioned above the moving belt for regulating the thickness of the slurry that  
8 passes beyond said blade;

9 e. a lens disposed near the moving belt between said fluid reservoir and said blade for  
10 receiving light reflected from the upper surface of the slurry;

11 f. a light sensor disposed relatively remote from the slurry, said light sensor generating  
12 electrical signals in response to light received thereby;

13 g. a fiber optic cable extending between the lens and the light sensor for coupling light  
14 received by said lens to said light sensor;

15 h. a control circuit coupled to said light sensor and responsive to said electrical signals  
16 for generating a control signal, said control circuit being coupled to said control valve for  
17 providing said control signal to regulate the flow of slurry through said control valve.

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19 2. The level control system recited by claim 1 wherein said control valve is responsive  
20 to pneumatic pressure, and wherein said control circuit provides said control signal in the form of  
21 a regulated pneumatic pressure to said control valve.

22  
23 3. The level control system recited by claim 2 wherein said regulated pneumatic  
24 pressure is substantially inversely proportional to the rate of flow of slurry through said control  
25 valve.

26  
27 4. The level control system recited by claim 2 wherein said control circuit includes a  
28 pressure regulator responsive to said electrical signals for generating said control signal.